

HISTORY OF THE
INSTITUTE FOR RESEARCH IN VISION

OF THE

OHIO STATE UNIVERSITY

1947 - 1970

PREPARED BY

H. RICHARD BLACKWELL, DIRECTOR

In response to a request made by a group of faculty members interested in research in vision, in early 1947, the Dean of the Graduate School appointed a Committee under the chairmanship of Prof. Fred A. Hitchcock to study the need for an institute concerned with this subject. Professors H. E. Burt, A. M. Cutler, G. A. Fry, C. A. Perry and A. W. Smith were the other members of this committee.

In June 1947, the committee submitted a report outlining the current status of research in vision at The Ohio State University, and recommending the organization of an institute for coordinating and extending University activities in this field. The report was accepted by the Dean of the Graduate School and the Graduate Council, and forwarded to the President.

On November 9, 1947 at a meeting of the Board of Trustees, the President reported the findings and recommendations of the Committee and recommended on the basis of this report that there be established by the Board of Trustees The Ohio State University Institute for Research in Vision. The President recommended that the Institute be organized to have:

- (1) A Director nominated by the President of the University and appointed by the Board of Trustees upon recommendation of the Dean of the Graduate School.
- (2) An Executive Committee consisting of the Director of the Institute as Chairman, the Dean of the Graduate School

and three additional members appointed by the President upon recommendation of the Dean of the Graduate School.

- (3) A Council consisting of one representative from each area of the campus actively engaged in research in vision.

Matters of policy affecting the Institute were to be determined by the Council, it being understood, however, that in all respects the Institute was to be subject to the appropriate rules, regulations, and policies of the University, and that the Director was to be responsible through the President to the Board of Trustees.

On a motion of General Dargusch, seconded by Mr. Power, the above recommendation of the President was approved by unanimous vote, and the Institute for Research in Vision came into being.

During the following year, at the suggestion of the Dean of the Graduate School, the original committee headed by Prof. Fred A. Hitchcock set about the task of selecting a Director for the Institute.

A report was submitted to the Graduate Council on March 12, 1949 which contained the committee's findings and recommendations with regard to the directorship and further recommendations with regard to details of the organization of the Institute. This report recommended

that the Co-directors of the Institute, Professors A. M. Culler and Glenn A. Fry be reappointed for a two year period and that a survey be made to find a more permanent solution to the matter of the directorship of the Institute.

The report also recommended the appointment of the Executive Committee and Council. The report was approved by the Graduate School, the President of the University, and the Board of Trustees. During the summer of 1949, Professors A. M. Culler and G. A. Fry were officially appointed Co-directors.

The Executive Committee of the Institute established the administrative policies, allocated funds made available to the Institute, and passed upon recommendations submitted for new appointments to the membership of the Institute. The Council of the Institute consisted of those who were actively engaged in research in vision. The Council was given responsibility for making recommendations about the general policies of the Institute, its scope of activity, and specific projects to be supported by the Institute.

The Visual Demonstration Center was developed through the efforts of Professors H. L. Sherman and R. L. Mooney in the interests of bridging the gap between those interested in the biological and physical sciences and those interested in the social sciences.

In a final report of the Committee for the Organization of an Institute for Research in Vision, it was recommended that offices and

research laboratories for the Institute be temporarily housed in Annex A, south of the Ohio Union, although this did not occur.

During the academic year 1950-51, no change occurred in the organization or personnel of the Institute. In its annual report, the Executive Committee recommended that the Institute be continued under the present directorship during the coming year but that a move be made toward the selection of a permanent director. During that year the Institute was host to the 27th meeting of the Vision Committee of the Armed Forces and National Research Council. The most outstanding need during the period was considered to be that of space and facilities for research in the field of eye diseases.

There was no change in organization or personnel during the academic year 1951-52. The Visual Demonstration Center continued to serve groups on and off campus, reports were made to the council on on-going research by members of the Council, and in March of 1952 the Institute sponsored a public lecture on color vision by Dr. W. D. Wright of the Imperial College of Science and Technology, University of London.

In December 1953, Prof. Culler, one of the Co-directors of the Institute suffered a stroke and had to remain inactive during the remainder of the year. Efforts were intensified to secure a permanent director. During 1954, two public lectures were held, one given by Dr. Gerhart Brecher, who was being considered for the Directorship, and the other by Dr. Ragnar Granit, Director of the Nobel Institute for Neurophysiology of the Royal Caroline Institute in Stockholm. During the year Dr.

Mooney assumed responsibility for the Visual Demonstration Center.

In January of 1957, Dr. Gerhard A. Brecher was named Director of the Institute for Research in Vision. At a meeting of the Council of the Institute on January 29, 1957, the feasibility of establishing a separate research building or laboratories for the Institute was debated. The opinion expressed was that if research quarters were made available a permanent staff would be necessary.

A constitution for the Institute was formulated by the Constitution Committee consisting of Professors V. J. Ellerbrock, D. R. Meyer and L. E. Lipetz. After being read and discussed in Council meetings, it was submitted for final action on May 24, 1957.

By letter to the Council members on November 7, 1957, it was announced that Prof. Brecher was leaving Ohio State University at the end of the year. A meeting of the Council was called for November 14, at which it was reported that the proposed Constitution had been transmitted to the President. The need for a permanent budget for the Institute was discussed, as was the need for appointment of a permanent director with an outstanding reputation. On November 18, a statement prepared for the Council by Profs. Lipetz and Makley was sent to Prof. Brecher for his incorporation in his final report to the Executive Committee and the University Administration concerning the future of the Institute. On November 26, Prof. Philburn Ratoosh assumed the position as Acting Director of the Institute, following election by the Council.

During the first decade of its existence, the Institute for Research in Vision was operated primarily as a faculty committee seeking to advance the pursuit of research in vision by individual faculty members. The Institute had certain funds available for allocation to individual faculty members, but had no operating budget of its own, no staff positions, and no research facilities. The Co-directors and the Director served without salary, being appointed with salary with professorial rank in one or another department of instruction. During the entire decade, the Institute was administered under the auspices of the Graduate School which provided continued firm support for the principle of interdisciplinary research. The continued existence of the Institute bears tribute to the steady and dedicated support of individual members of the University faculty who believed stoutly that research in vision was an interdisciplinary activity worthy of a University's unique intellectual resources. The Co-directors for a period of years, Professors Culler and Fry, served the University as Chairman of the Department of Ophthalmology and as Director of the School of Optometry respectively, and served as Co-directors of the Institute entirely as a "labor of love". In their important administrative posts, these dedicated scholars dealt daily with the practical consequences of incomplete knowledge of the workings of human vision, and sought through the mechanism of the Institute to add something to the store of human knowledge on the subject. Members of the Executive Committee gave freely of their time and enthusiasm to give

viability to the concept of an interdisciplinary organization cutting across departmental and college lines, dedicated to a search for some of the truths about the visual process as a wonder of biological development.

The lone Director of the Institute during this decade, Professor Gerhard Brecher, remained in the post for less than a year. A physiologist of good reputation, Professor Brecher was apparently frustrated by the lack of resources available to make the Institute more than a devout hope.

Late in 1957, the Office of Instruction and Research was reorganized by the appointment of an Assistant for Research (and an Assistant for Instruction) operating under the Vice President for Instruction and Research. Dr. Karl E. Krill assumed this post and brought to it the enthusiasm and pragmatism of an engineer which he was by profession. It was decided that research institutes such as the Institute for Research in Vision would be assigned to the Office of Instruction and Research and that efforts would be made to develop their potential value to the University community, by assigning them modest budgets for operation. In line with this new philosophy, Dr. Krill and Professor Glenn A. Fry visited Ann Arbor, Michigan in early 1958 to interview Dr. H. Richard Blackwell, Director of the Vision Research Laboratories at the University of Michigan, regarding his possible appointment as Director of the Institute for Research in Vision. Subsequently, Dr. Blackwell delivered

a lecture at the University in the spring of 1958. He was appointed Director of the Institute in September 1958, a post he has held continuously since that time.

At a meeting of the Institute Council in October 1958, Dr. Krill and Professor Blackwell announced a reorganization of the Institute. The Institute was to be established as an operating agency of the University assigned to the Office of the Vice President for Instruction and Research. It was to be provided a modest budget, and space for offices and research laboratories in the University Research Center. In view of the reorganization, the Council of the Institute was to be abolished and appointment of an Executive Committee was to be deferred. However, Professor Blackwell announced the initiation of a series of Institute seminars primarily for faculty members. These seminars were to be held in the evenings at Professor Blackwell's home, and were to provide an opportunity for the various faculty members who had been members of the Institute Council, and others, to discuss research related to vision, to exchange technical information, and to spread the contagion of a vital interest in vision research as widely as possible within the University community. These seminars have been held ever since 1958, with topics such as the biochemistry of visual photopigments, the anatomy and electrophysiology of the retina, the psychophysics of visual discriminations, the etiology of diseases of the retina, and visual implications of the artistic techniques of such painters as Cezanne.

During the period from 1958-62, the Institute developed an outstanding facility for research in vision at the University Research Center. Funds were obtained from special appropriations from the Ohio Legislature, special gifts from the Ohio Lions Eye Research Foundation, and a special grant from the National Institutes of Health. The total cost of the facility exceeded \$250,000. Laboratories were prepared for such diverse areas of study as: anatomy and biochemistry of the eye, electrophysiology of animals and man, basic psychophysics of normal and abnormal vision, diagnosis of diseases of the retina, and visual factors in illumination and transportation safety. As this facility was completed, active research investigations were begun. Professors L. E. Lipetz and J. H. Prince joined the staff of the Institute by transfer from appointment in other units of the University. Other members of the University faculty were appointed for short periods as members of the Institute staff. Gradually, the Institute staff was enlarged by appointment of new members of the University faculty from outside.

At the present time, the resident staff of the Institute consists of the following investigators:

Leo E. Lipetz, Professor and Chairman, Academic Faculty
of Biophysics

Stanley W. Smith, Assoc. Professor of Biophysics and of
Physiological Optics

David G. McConnell, Assoc. Professor of Biochemistry
and Molecular Biology

William R. Biersdorf, Assoc. Professor of Ophthalmology

Carl R. Ingling, Asst. Professor of Biophysics and
Physiological Optics

Thomas G. Cleaver, Asst. Professor of Electrical Engineering

O. Mortenson Blackwell, Research Associate

H. Richard Blackwell, Professor of Biophysics, of Physio-
logical Optics, and of Ophthalmology.

The resident staff of active investigators on duty at the Institute
has also included the following at some time or other since 1958.

Jack H. Prince, Assoc. Professor of Ophthalmology

Gerald Westheimer, Assoc. Professor of Physiological
Optics

Bradford W. Wild, Assoc. Professor of Physiological
Optics

John D. Stephan, Assistant Professor of Ophthalmology

Otto Wiegmann, Research Associate

Gordon Ruskell, Research Associate

Andre Birkhoff, Research Associate

Robert Brainard, Research Associate

Gordon A. Bixel, Research Associate

Richard N. Schwab, Research Associate

Lorraine Trojan, Research Associate

The Institute has been favored by the following eminent Visiting
Scientists from abroad who have come to join in the research program of
the Institute for periods ranging from a few months to a year or more.

Dr. Tsuneo Tomita, Keio University, Tokyo, Japan

Dr. Yoko Hashimoto, Keio University, Tokyo, Japan

Dr. Ernst Baumgardt, Collège de France, Paris, France

Dr. Clotilde Bourde, Sorbonne University, Paris, France

Dr. Louis Besseling, University of Capetown, Capetown
South Africa

Dr. Zenju Nakamura, First National Hospital and Tokyo
Medical and Dental University, Tokyo, Japan

On four rare occasions, the Institute has made the Special
Award for Research in Vision to the following eminent investigators.

Dr. W. S. Stiles, National Physical Laboratories,
Teddington, Great Britain

Dr. George Wald, Harvard University
(more recently, Nobel Laureate)

Dr. Ernst Baumgardt, Collège de France, Paris, France

Dr. Samuel Renshaw, The Ohio State University

These awards were duly bestowed by the President in the name of the
University.

In 1963, the Institute assumed responsibility for the Ohio State
University Invitational Vision Conferences, which were initiated by
Professor Samuel Renshaw in 1941 and run by him continuously until his
retirement. These conferences were a very early precursor of the "shirt-
sleeves conference" which has achieved so much contemporary popularity
and acclaim.

On November 28, 1966, the Institute for Research in Vision was officially named by the Probate Court as partial beneficiary in the last will and testament of Miss Helen J. Kennedy of Xenia, Ohio. The total sum received from this bequest was \$135,788.61, of which \$100,000.00 has been placed in investments to provide a perpetual endowment to provide continuous support for the research activities of the Institute.

In line with University efforts at decentralization, at its own request, the Institute for Research in Vision was assigned to the new College of Biological Sciences effective July 1, 1966. The Institute is operated as a separate operating agency of the College, with the Director reporting to the Dean of the College.

The Centennial year finds the Institute for Research in Vision reaching maturity as an agency of the University. During its 23 years of existence, it has helped to catalyze interest in research in vision throughout regular departments of instruction in the University. Substantial assistance has been provided to the Department of Ophthalmology and the now College of Optometry whose leaders served as Co-directors of the Institute in the early years. Perhaps more noteworthy has been the role played by the Institute in bringing about the establishment of an Academic Faculty of Biophysics, and in supporting its continuing program. The Institute has also provided support to the instructional programs of the University in biochemistry and molecular biology, architecture, prevent-

ive medicine, and in civil, electrical, and biomedical engineering. Today the Institute serves as a major research facility for graduate students specializing in biophysics, biochemistry and molecular biology, physiological optics, biomedical engineering, psychology, and architecture and to resident physicians specializing in ophthalmology and preventive medicine.

Since 1958, the Institute has been directly responsible for programs of research leading to countless publications by resident staff members. The records of these evidences of research achievement are to be found in the personnel files of the individual involved and in the archives of the instructional departments in which the individuals have held professorial appointment.

The Institute has also sponsored a number of public lectures since 1958. These lectures have all been co-sponsored by the Graduate School, and appear in the archives of this agency of the University.

The major research facility which has been developed since 1958 by the Institute could not have been brought to completion without the dedicated years of service contributed by James G. Ohmart. Mr. Ohmart came to the University from the University of Michigan with Professor Blackwell in 1958 and remained until 1966, when the Institute facility could well be considered complete.

Other members of the Institute staff since 1958 whose dedicated service has meant the difference between success and failure include

the following:

Eleanor M. Palo, Administrative Assistant

Robert M. Ashcraft, Shop Manager

William A. Bruce, Laboratory Supervisor

Forrest A. Heft, Research Specialist

Katherine A. Heft, Research Technician

This history has been duly recorded this November 21, 1969

by H. Richard Blackwell, Director.